Maxillary anterior segmental distraction osteogenesis (MASDO) in orthodontic treatment of cleft lip and palate patients.

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Patients with a cleft lip and palate typically show a high incidence of Class III malocclusion and mid-facial retrusion. Maxillary anterior segmental distraction osteogenesis (MASDO) facilitates the forward advancement of the anterior maxillary segments without affecting the patient’s velopharyngeal function. The segmental osteotomy also corrects the anteriorly-flattened dental arches and enhance the crown exposure of the upper incisors. Furthermore, MASDO can be applied in combination with transverse distraction osteogenesis or LeFort1 osteotomy. I will demonstrate that MASDO is effective for correcting severe skeletal Class III problems in patients with cleft lip and palate.
**Indications**

MASDO is a new alternative to LeFort1 osteotomy or employed in combination with LeFort1 and/or TDO for use in CLP patients with severe class III problems **exhibiting**

1) VPI.

2) flattened dental arch.

3) **limited crown exposure** of the upper incisors.

**Retention**

The average **relapse rate** at 1 year after MASDO was **less than 20%** and the greater relapses were considered to be related to **bite-opening rotation of the Mx** during the operation.

**Post-MASDO Orthod Tx**

The **distracted bone gap** can be **closed efficiently** by orthodontic tooth movement.
Dr. Yamashiro is a professor and chairman of orthodontics at Osaka University, Japan. Prior to his current position, he chaired the orthodontic departments of Okayama University. He received his dental degree, clinical training in orthodontics and doctoral degree on bone biology from Osaka University. He is a member of the Edward H. Angle Society of Orthodontists (East component) and a Fellow of Dental Surgery, Royal College of Surgeon of Edinburgh. His post-doctoral studies were in developmental biology in Helsinki, Finland. His scientific interests include the biological and molecular mechanism of palatogenesis, tooth development and craniofacial development. He is on the Editorial Board of European Journal of Orthodontics, Orthodontics and Craniofacial Research.